

## **REMARKS**

### **I. Introduction**

Claims 17, 18, 20 to 27 and 29 to 32 are currently pending in this application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested. At the outset, it is noted that U.S. Patents 6,145,847 and 5,370,406 were crossed out on form PTO-1449 attached to the Office Action dated March 12, 2004. Enclosed please find a copy of these references for the Examiner's consideration.

### **II. Rejection of Claims 17, 20, 28 and 30 to 32 Under 35 U.S.C. § 103 (a)**

Claims 17, 20, 28 and 30 to 32 were rejected as being obvious over the combination of U.S. Patent No. 5,582,415 ("Yoshida et al."), U.S. Patent No. 4,140,323 ("Jacobs"), and U.S. Patent No. 5,230,521 ("Ueta"). Claim 28 has been canceled thus rendering the rejection of this claim moot. Applicant respectfully submits that claims 17, 18, 20 and 30 to 32, are patentable over the combination of Yoshida et al., Jacobs and Ueta for the following reasons.

Claim 17 relates to a flat gasket for a reciprocating engine or a driven machine having a cylinder head. Claim 17 recites that the gasket includes at least one metal sheet 0.05 to 0.5 mm thick which is provided with a coating of an elastomer film at least on sides facing outward in at least one sealing area and which has an edge area. Claim 17 further recites that the edge area is formed by at least one of an outer contour of the cylinder head, a cylinder bore or a water or oil passage in the cylinder head. Claim 17 further recites that the edge area is adjacent to at least one peripheral self-contained cavity (2). Claim 17 further recites that the cavity (2) is enclosed by at least one bead (3) of the metal sheet (1) and a second metal sheet (4) bridging the bead, which are permanently joined together adjacent to the bead. Claim 17 further recites that the cavity (2) is filled completely with a hydraulic fluid.

Yoshida et al. purportedly relate to a metal gasket 10. Abstract. Yoshida et al. state that metal gasket 10 comprises a beaded plate 45, including bead 16, and a stiffening plate 46 which is stated to wrap around a periphery of the

opening of the beaded plate 45. See col. 8, lines 3 to 5. Metal gasket 10 is stated to be held between cylinder block 1 and cylinder head 4. See col. 5, lines 33 to 35.

Jacobs purportedly relates to an embossed gasket. Abstract. Jacobs recites a gasket having a filler filled cavity. Abstract.

Ueta purportedly relates to a metallic laminate gasket with plates of different bead widths fixed together. Abstract.

The Final Office Action alleges that Jacobs discloses “a gasket having a cavity (34) that is completely filled with a hydraulic medium (36) in order to prevent embossment (around cavity 34) from flattening out and losing much of its intended sealing capacity.” See Final Office Action at p. 2. The Final Office Action further alleges that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yoshida et al. as taught by Jacobs in order to prevent the bead from flattening out and losing sealing capacity.” See Final Office Action at pp. 2 to 3. The Final Office Action, referring to col. 3, lines 18 to 19, further states that because Jacobs discloses a filler made from silicone rubber stated to flow the filler is a fluid. Final Office Action at pp. 8 to 9. Col. 3, lines 18 to 20 states as follows:

Where the filler is a sealant, it will also tend to flow sufficiently to fill imperfections, such as in confronting surfaces to be sealed or in the gasket body surface, thereby preventing leakage through such imperfections.

Applicant respectfully submits that the above reference in no way indicates that the filler is a fluid, as recited in claim 17. Jacobs states that a filler material such as Sylgard 187, a resilient elastomeric material, is disposed in indentation 34. See col. 2, lines 52 to 57. The Sylgard 187 is stated to require a catalyst to facilitate curing of the system. See col. 2, lines 62 to 64 (emphasis added). Applicant submits that a cured resilient elastomeric material is not a hydraulic fluid, as recited in amended claim 17. The above reference to “flow,” placed in context, simply refers to the deformation of the resilient elastomeric material sufficient to fill imperfections in the confronting surfaces to be sealed or in the gasket body surface. This interpretation is consistent with the stated preferred use of a high temperature resistant silicone elastomer. See col. 4, lines 20 to 21. Thus, the filler material is stated to be cured and its material properties chosen so as to avoid melting. A cured unmelted resilient elastomeric filler material cannot fairly be said to qualify as a liquid.

Therefore, the combination of Yoshida et al., Jacobs and Ueta does not disclose, or even suggest, all of the limitations of claim 17.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). As stated above, the combination of Yoshida et al., Jacobs and Ueta fails to disclose, or even suggest, each and every feature of amended claim 17. Specifically, the combination of Yoshida et al., Jacobs and Ueta does not teach, or even suggest, a cavity (2) filled completely with a hydraulic fluid, as recited in claim 17. It is therefore respectfully submitted that the combination of Yoshida et al., Jacobs and Ueta does not render obvious claim 17 and is allowable for these reasons. Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claim 17 are respectfully requested.

As for claims 20 and 30 to 32, which ultimately depend on claim 17 and therefore include all of the limitations of claim 17, Applicant submits that these claims are patentable for at least the same reasons provided above in support of claim 17. *In re Fine, supra* (any dependent claim depending from a non-obvious independent claim is non-obvious). Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claims 20 and 30 to 32 are respectfully requested.

### **III. Rejection of Claim 18 Under 35 U.S.C. § 103 (a)**

Claim 18 was rejected as obvious over the combination of U.S. Patent No. 5,054,795 ("Udagawa et al."), Yoshida et al. and Jacobs. Applicant respectfully

submits that claim 18 is patentable over the combination of Udagawa et al., Yoshida et al. and Jacobs for the following reasons.

Claim 18 relates to a flat gasket for a reciprocating engine or a driven machine having a cylinder head. Claim 18 recites that the gasket includes at least one metal sheet 0.05 to 0.5 mm thick which is provided with a coating of an elastomer film and which has an edge area. Claim 18 further recites that the edge area is formed by at least one of an outer contour of the cylinder head, a cylinder bore or a water or oil passage in the cylinder head. Claim 18 further recites that the edge area is adjacent to at least one peripheral self-contained cavity (2), wherein the cavity (2) is filled completely with a hydraulic medium (6). Claim 18 further recites that the metal sheet has at least on sides facing outward from the cavity an elastomer film. Claim 18 has been amended to recite that the metal sheet (1) is flanged back onto itself in the edge area, forming the cavity (2), and is **permanently connected** to itself adjacent to the cavity. No new matter has been added. See the Specification, for example, at p. 8, lines 6 to 7.

Udagawa purportedly relates to a metal laminate gasket. The gasket 30 is stated to include a main plate 31 and a pressure regulation plate 32 situated above the main plate. See col. 2, lines 50 to 52. The main plate 31 is stated to include a flat base portion 33, a curved portion 34, and a flange 35. See col. 2, lines 53 to 55. The curved portion is stated to have a resiliency and forms an opening 36, through which a piston of an engine reciprocates. See col. 2, lines 57 to 59.

The combination of Udagawa et al., Yoshida et al. and Jacobs does not disclose, or even suggest, that the metal sheet (1) is flanged back onto itself in the edge area, forming the cavity (2), and is permanently connected to itself adjacent to the cavity, as recited in amended claim 18. Therefore, Applicant submits that the combination of Udagawa et al., Yoshida et al. and Jacobs does not render obvious amended claim 18. Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of amended claim 18 are respectfully requested.

#### **IV. Rejection of Claims 21 to 23 Under 35 U.S.C. § 103 (a)**

Claims 21 to 23 were rejected as obvious over the combination of Yoshida et al., Jacobs, Ueta and U.S. Patent No. 6,145,847 ("Maeda et al.").

Applicant respectfully submits that claims 21 to 23, which ultimately depend from claim 17, are patentable over the combination of Yoshida et al., Jacobs, Ueta and Maeda et al. for at least the reasons provided above in support of the patentability of claim 17. Neither Ueta nor Jacobs nor Maeda et al. cure all of the deficiencies of Yoshida et al. The combination of Ueta, Jacobs and Maeda et al. does not disclose, or even suggest, a cavity (2) filled completely with a hydraulic fluid, as recited in claim 17, and therefore, does not render obvious claims 21 to 23. Therefore, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claims 21 to 23 are respectfully requested.

**V. Rejection of Claim 24 Under 35 U.S.C. § 103 (a)**

Claim 24 was rejected as obvious over the combination of Yoshida et al., Jacobs, Ueta and U.S. Patent No. 4,428,593 ("Pearlstein"). Applicant respectfully submits that claim 24, which ultimately depends from claim 17, is patentable over the combination of Yoshida et al., Jacobs, Ueta and Pearlstein for at least the reasons provided above in support of the patentability of claim 17. Neither Jacobs nor Ueta nor Pearlstein cure the above noted deficiencies of Yoshida et al. The combination of Jacobs, Ueta and Pearlstein does not disclose, or even suggest, a cavity (2) filled completely with a hydraulic fluid, as recited in claim 17, and therefore, does not render claim 24 obvious. Therefore, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claim 24 are respectfully requested.

**VI. Rejection of Claims 25 to 27 Under 35 U.S.C. § 103 (a)**

Claims 25 to 27 were rejected as obvious over the combination of Yoshida et al., Jacobs, Ueta and U.S. Patent No. 6,135,459 ("Hiramatsu et al."). Applicant respectfully submits that claims 25 to 27 are patentable over the combination of Yoshida et al., Jacobs, Ueta and Hiramatsu et al. for at least the following reasons.

Claim 25 relates to a flat gasket for a reciprocating engine or a driven machine having a cylinder head. Claim 25 recites that the gasket includes at least one metal sheet 0.05 to 0.5 mm thick which is provided with a coating of an elastomer film at least on sides facing outward in at least one sealing area and which has an edge area. Claim 25 recites that the edge area is formed by at least

one of an outer contour of the cylinder head, a cylinder bore or a water or oil passage in the cylinder head. Claim 25 further recites that the edge area is adjacent to at least one peripheral self-contained cavity (2), wherein the cavity (2) is filled completely with a hydraulic medium (6). Claim 25 further recites that the cavity (2) is enclosed by at least one bead (3) of the metal sheet (1) and a second metal sheet (4) bridging the bead, which are permanently joined together adjacent to the bead. Claim 25 further recites a third metal sheet (8) which is arranged between the metal sheet (1) and the second metal sheet (4). Claim 25 further recites that the third metal sheet is included in a connection between the first and second metal sheets and that the metal sheet (1) and the third metal sheet (8) define a first portion of the cavity (2). Claim 25 has been amended to recite that the third metal sheet (8) having an orifice such that the first portion and second portion of the cavity (2) on both sides of the third metal sheet are in hydraulic connection (16) with one another. No new matter has been added. See the Specification, for example, at p. 8, lines 28 to 30 and Figure 5.

Hiramatsu et al. purportedly relates to metal gasket. As can be seen in Figure 2, a stopper plate 4 is positioned between bead base plates 2 and 3. See also col. 5, lines 6 to 9. Hiramatsu et al. do not disclose, or even suggest, the third metal sheet (8) having an orifice such that the first portion and second portion of the cavity (2) on both sides of the third metal sheet are in hydraulic connection (16) with one another, as recite in amended claim 25. Stopper plate 4 is not stated to include an orifice. Therefore, Hiramatsu does not cure the deficiencies of Yoshida et al. and the combination of Yoshida et al., Jacobs, Ueta and Hiramatsu does not render obvious amended claim 25. Therefore, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of amended claim 25 are respectfully requested.


As for claims 26 and 27, which ultimately depend from amended claim 25 and therefore include all of the limitations of amended claim 25, Applicant submits that these claims are patentable for at least the same reasons provided above in support of amended claim 25. *In re Fine, supra*. Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claims 26 and 27 are respectfully requested.

**VII. Conclusi n**

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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